

MILWAUKEE WATER WORKS

Cost of Service Study

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COMPARATIVE INCOME STATEMENT

ACCT NO.	OPERATING REVENUES	2010	2011	2012	UTILITY ESTIMATE 2013	TEST YEAR 2014
460	Unmetered Sales to General Customers					
	Residential	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Commercial	192,136	42,052	42,052	42,000	42,000
	Industrial	0	0	0	0	0
	Public Authority	0	0	0	0	0
461	Metered Sales to General Customers					
	Residential	26,755,358	31,076,074	33,543,915	34,310,589	34,513,290
	Commercial	15,477,653	17,880,089	19,683,396	19,488,637	19,955,655
	Industrial	5,171,662	6,020,628	6,030,627	5,922,540	5,980,258
	Public Authority	3,134,201	3,584,339	3,611,012	3,713,404	3,780,240
	Total general sales	\$ 50,731,010	\$ 58,603,182	\$ 62,911,002	\$ 63,477,170	\$ 64,271,443
462	Private fire protection service	671,868	681,894	695,448	719,666	719,666
463	Public fire protection service	5,934,984	6,238,836	6,463,642	6,428,186	6,812,969
465	Sales to irrigation customers	0	0	0	0	0
466	Sales for resale	8,790,415	9,761,743	10,443,513	9,977,492	9,975,581
467	Interdepartmental sales	0	0	0	0	0
470	Forfeited discounts	2,173,363	2,349,323	2,582,542	2,800,000	3,000,000
472	Rents from water property	278,129	252,081	370,305	320,000	330,000
473	Interdepartmental rents	0	0	0	0	0
474	Other water revenues	127,444	2,605,396	464,840	475,000	500,000
	TOTAL OPERATING REVENUES	\$ 68,707,213	\$ 80,492,455	\$ 83,931,292	\$ 84,197,515	\$ 85,609,659
	OPERATING EXPENSES					
	SOURCE OF SUPPLY					
600	Operation labor	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
601	Operation labor and expenses	0	0	0	0	0
602	Purchased water	0	0	0	0	0
603	Miscellaneous expenses	0	0	0	0	0
604	Rents	0	0	0	0	0
610	Maintenance supervision and engineering	0	0	0	0	0
611	Maintenance of structures and improvements	0	0	0	0	0
612	Maint. of collecting and impounding reservoirs	0	0	0	0	0
613	Maintenance of lake, river, and other intakes	0	0	0	0	0
614	Maintenance of wells and springs	0	0	0	0	0
616	Maintenance of supply mains	0	0	0	0	0
617	Maintenance of misc. water source plant	0	0	0	0	0
	PUMPING EXPENSES					
620	Operation supervision and engineering	0	0	0	0	0
621	Fuel for power production	0	0	0	0	0
622	Power production labor and expenses	0	0	0	0	0
623	Fuel or power purchased for production	4,970,534	5,765,338	5,746,790	5,494,221	5,828,819
624	Pumping labor and expenses	340,968	336,811	347,478	341,752	350,347
625	Expenses transferred--credit	0	0	0	0	0
626	Miscellaneous expenses	58,924	84,025	106,116	83,022	84,690
627	Rents	0	0	0	0	0
630	Maintenance supervision and engineering	195,981	177,652	177,852	183,828	188,452
631	Maintenance of structures and improvements	204,463	866,168	90,404	387,012	160,000
632	Maintenance of power production equipment	0	0	0	0	0
633	Maintenance of pumping equipment	801,251	549,776	571,537	640,855	615,138

COMPARATIVE INCOME STATEMENT
(continued)

ACCT NO.	OPERATING EXPENSES	2010	2011	2012	UTILITY ESTIMATE 2013	TEST YEAR 2014
WATER TREATMENT EXPENSES						
640	Operation supervision and engineering	\$ 471,886	\$ 447,576	424,775	454,800	459,348
641	Chemicals	3,220,729	3,248,932	2,727,355	3,096,329	2,551,781
642	Operation labor and expenses	4,467,348	4,047,276	3,819,643	4,167,098	4,208,769
643	Miscellaneous expenses	796,925	839,451	869,064	844,558	853,003
644	Rents	0	0	0	0	0
650	Maintenance supervision and engineering	197,420	177,744	179,075	187,518	189,393
651	Maintenance of structures and improvements	1,128,756	616,862	594,974	789,334	797,227
652	Maintenance of water treatment equipment	2,601,071	3,117,393	3,050,900	3,285,070	3,242,921
TRANS & DISTRIBUTION EXPENSES						
660	Operation supervision and engineering	1,021,265	904,973	886,932	951,789	961,307
661	Storage facilities expenses	0	0	0	0	0
662	Transmission and distribution expenses	1,941,852	859,419	764,086	1,201,166	1,213,177
663	Meter expenses	829,419	657,629	716,868	743,214	750,646
664	Customer installations expenses	0	0	0	0	0
665	Miscellaneous expenses	720,997	1,743,067	1,704,928	1,405,877	1,419,935
666	Rents	1,232,510	1,232,510	1,275,000	1,259,140	1,271,731
670	Maintenance supervision and engineering	0	0	0	0	0
671	Maintenance of structures and improvements	0	0	0	0	0
672	Maintenance of distr.reservoirs and standpipes	3,853	1,165,205	41,534	1,044,593	499,999
673	Maintenance of transmission and distr. mains	4,900,900	5,939,597	6,113,149	5,713,948	5,466,088
675	Maintenance of services	3,532,354	3,331,096	3,548,773	3,515,800	3,550,958
676	Maintenance of meters	227,816	295,421	317,448	284,069	286,910
677	Maintenance of hydrants	959,946	881,263	1,040,733	972,148	981,869
678	Maintenance of miscellaneous plant	159,299	119,783	136,913	140,236	141,639
CUSTOMER ACCOUNTS EXPENSES						
901	Supervision	102,670	99,922	87,795	98,248	99,230
902	Meter reading labor	225,390	146,180	161,555	180,226	157,028
903	Customer records and collection expenses	0	646,000	292,000	315,793	634,960
904	Uncollectible accounts	598,075	617,722	648,078	628,673	90,000
905	Miscellaneous customer accounts expenses	0	0	0	0	0
906	Customer service and information expenses	12,808	12,665	4,871	10,217	10,320
SALES EXPENSES						
910	Sales Expenses	0	0	0	0	0
ADMIN. & GENERAL EXPENSES						
920	Administrative and general salaries	2,458,825	2,292,857	2,248,940	2,368,544	2,250,229
921	Office supplies and expenses	255,272	321,227	330,275	305,281	308,334
922	Administrative expenses transferred -- credit	0	0	0	0	0
923	Outside services employed	1,740,932	1,628,064	1,750,784	1,723,659	1,740,896
924	Property insurance	53,560	24,310	28,858	35,932	36,291
925	Injuries and damages	708,080	653,042	628,483	669,834	676,532
926	Employee pensions and benefits	7,899,909	6,627,745	5,233,263	8,056,801	6,466,999
928	Regulatory commission expenses	149,861	6,263	2,554	125,000	175,000
929	Duplicate charges -- credit	0	0	0	0	0
930	Miscellaneous general expenses	98,721	107,488	103,320	104,208	105,250
931	Rents	176,801	174,239	177,071	177,797	179,575
932	Maintenance of general plant	22,363	28,185	19,676	23,642	23,878
TOTAL OPER. & MAINT. EXPENSES						
		\$ 49,489,734	\$ 50,790,876	\$ 46,969,850	\$ 52,011,231	\$ 49,028,672
404-407	DEPRECIATION EXPENSE	10,611,397	11,153,987	11,381,572	11,699,692	14,109,431
404-407	AMORTIZATION EXPENSE	0	0	0	0	0
404-407	TAXES AND TAX EQUIVALENT	11,034,525	11,936,143	12,485,312	12,993,057	13,656,828
TOTAL OPERATING EXPENSES						
		\$ 71,135,656	\$ 73,881,006	\$ 70,836,733	\$ 76,703,980	\$ 76,794,931
NET OPERATING INCOME						
		\$ <u>(2,428,443)</u>	\$ <u>6,611,449</u>	\$ <u>13,094,559</u>	\$ <u>7,493,534</u>	\$ <u>8,814,728</u>

NET INVESTMENT RATE BASE

UTILITY FINANCED PLANT IN SERVICE	\$	543,542,307
Less: ACCUMULATED PROVISION FOR DEPRECIATION		202,304,090
Less: REGULATORY LIABILITY		<u>7,707,596</u>
NET INVESTMENT	\$	333,530,621
Plus: MATERIALS AND SUPPLIES		<u>2,600,000</u>
NET INVESTMENT RATE BASE	\$	<u><u>336,130,621</u></u>
RATE OF RETURN ON RATE BASE		5.375%

ESTIMATED INCOME STATEMENT FOR THE TEST YEAR 2014
AND REVENUE REQUIREMENT

	PRESENT RATES	INCREASE	AFTER RATE INCREASE
	<u></u>	<u></u>	<u></u>
TOTAL OPERATING REVENUES	\$ 85,609,659	\$ 9,253,824	\$ 94,863,483
OPERATING EXPENSES:			
OPERATION & MAINTENANCE EXPENSES	\$ 49,028,672		\$ 49,028,672
DEPRECIATION EXPENSE	14,109,431		14,109,431
AMORTIZATION EXPENSE	0		0
TAXES AND TAX EQUIVALENT	<u>13,656,828</u>		<u>13,656,828</u>
TOTAL OPERATING EXPENSES	\$ <u>76,794,931</u>		\$ <u>76,794,931</u>
NET OPERATING INCOME (LOSS)	\$ <u>8,814,728</u>		\$ <u><u>18,068,552</u></u>
RATE OF RETURN ON RATE BASE	2.62%		5.3755%

MILWAUKEE WATER WORKS
UTILITY FINANCED PLANT IN SERVICE AND DEPRECIATION EXPENSE
Test Year 2014

ACCT NO.	ACCOUNT DESCRIPTION	Balance	MAJOR	MAJOR	NORMAL	RETIRE-	Balance	TEST YEAR	DEPRECIATION	
		12/31/2013	ADDITIONS	RETIREMENTS	ADDITIONS	MENTS	12/31/2014	RATE BASE	RATE	EXPENSE
		(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)
INTANGIBLE PLANT										
301	Organization	0	0	0	0	0	0	0	N/A	0
302	Franchises and consents	0	0	0	0	0	0	0	N/A	0
303	Miscellaneous intangible plant	0	0	0	0	0	0	0	N/A	0
SOURCE OF SUPPLY										
310	Land and land rights	0	0	0	0	0	0	0	N/A	0
311	Structures and improvements	0	0	0	0	0	0	0	0.00%	0
312	Collecting and impounding reservoirs	0	0	0	0	0	0	0	0.00%	0
313	Lake, river, and other intakes	16,080,676	0	0	0	0	16,080,676	16,080,676	1.70%	273,371
314	Wells and springs	0	0	0	0	0	0	0	0.00%	0
316	Supply mains	5,618,708	0	0	0	0	5,618,708	5,618,708	1.80%	101,137
317	Other water source plant	0	0	0	0	0	0	0	0.00%	0
PUMPING PLANT										
320	Land and land rights	319,551	0	0	0	0	319,551	319,551	N/A	0
321	Structures and improvements	7,970,097	0	0	0	0	7,970,097	7,970,097	3.20%	255,043
323	Other power production equipment	0	0	0	0	0	0	0	0.00%	0
325	Electric pumping equipment (fully dep)	7,756,254	0	0	0	0	7,756,254	7,756,254	0.00%	0
325	Electric pumping equipment	20,841,606	0	0	2,200,000	275,000	22,766,606	21,804,106	4.40%	959,381
326	Diesel pumping equipment	0	0	0	0	0	0	0	0.00%	0
328	Other pumping equipment	0	0	0	0	0	0	0	0.00%	0
WATER TREATMENT PLANT										
330	Land and land rights	914,137	0	0	0	0	914,137	914,137	N/A	0
331	Structures and improvements	17,155,910	0	0	0	0	17,155,910	17,155,910	3.20%	548,989
332	Sand or Other Media Filtration Equip	37,380,845	0	0	0	0	37,380,845	37,380,845	3.30%	1,233,568
333	Membrane Filtration Equipment	0	0	0	0	0	0	0	0.00%	0
334	Other Water Treatment Equipment	63,300,000	0	0	0	0	63,300,000	63,300,000	6.00%	3,798,000

MILWAUKEE WATER WORKS
UTILITY FINANCED PLANT IN SERVICE AND DEPRECIATION EXPENSE
Test Year 2014
(continued)

ACCT NO.	ACCOUNT DESCRIPTION	Balance	MAJOR	MAJOR	NORMAL	RETIRE-	Balance	TEST YEAR	DEPRECIATION	
		12/31/2013	ADDITIONS	RETIREMENTS	ADDITIONS	MENTS	12/31/2014	RATE BASE	RATE	EXPENSE
		(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)
TRANSMISSION & DISTRIBUTION PLANT										
340	Land and land rights	29,629	0	0	0	0	29,629	29,629	N/A	0
341	Structures and improvements	0	0	0	0	0	0	0	0.00%	0
342	Distribution reservoirs and standpipes	7,955,123	0	0	0	0	7,955,123	7,955,123	1.90%	151,147
343	Transmission and distribution mains	261,133,660	0	0	5,686,581	187,500	266,632,741	263,883,201	1.30%	3,430,482
345	Services	0	0	0	0	0	0	0	0.00%	0
346	Meters	35,298,368	5,000,000	3,000,000	353,000	164,160	40,487,208	37,392,788	5.50%	816,354
348	Hydrants	29,370,748	0	0	1,845,527	400,000	30,816,275	30,093,512	2.20%	662,057
349	Other transmission and distr. plant	0	0	0	0	0	0	0	0.00%	0
GENERAL PLANT										
389	Land and land rights	99,760	0	0	0	0	99,760	99,760	N/A	0
390	Structures and improvements	3,671,634	0	0	0	0	3,671,634	3,671,634	2.90%	74,646
391	Office furniture and equipment	1,992,584	0	0	0	0	1,992,584	1,992,584	5.80%	94,162
391	Office furniture & equip - Computers	3,225,570	0	0	392,800	91,050	3,527,320	3,376,445	26.70%	655,067
392	Transportation equipment (fully dep.)	6,710,882	0	0	0	0	6,710,882	6,710,882	0.00%	0
392	Transportation equipment	799,069	0	0	417,000	104,250	1,111,819	955,444	13.30%	168,876
393	Stores equipment	0	0	0	0	0	0	0	0.00%	0
394	Tools, shop and garage equipment	1,179,499	0	0	288,700	46,175	1,422,024	1,300,762	5.80%	75,444
395	Laboratory equipment	626,522	0	0	55,000	13,750	667,772	647,147	5.80%	37,535
396	Power Operated Equip (fully dep.)	66,199	0	0	0	0	66,199	66,199	0.00%	0
396	Power operated equipment	2,395,656	0	0	185,000	46,250	2,534,406	2,465,031	7.50%	184,877
397	Communication equipment	2,674,492	0	0	195,500	38,000	2,831,992	2,753,242	15.00%	429,111
397	SCADA equipment	1,818,641	0	0	80,000	20,000	1,878,641	1,848,641	9.20%	160,185
398	Miscellaneous equipment	0	0	0	0	0	0	0	0.00%	0
TOTAL UTILITY FINANCED PLANT IN SERVICE		536,385,820	5,000,000	3,000,000	11,699,108	1,386,135	551,698,793	543,542,307		14,109,432

SYSTEM DEMAND RATIOS

MAXIMUM DAY SYSTEM DEMAND

TOTAL ANNUAL PUMPAGE 39,115,433,333 Gallons

AVERAGE DAILY PUMPAGE 107,165,571 Gallons

MAXIMUM DAY PUMPAGE 148,348,333 Gallons

FIRE FLOW:

GAL/MIN	17,962	
DURATION (HOURS)	18	
TOTAL FLOW	19,398,924	Gallons

AVERAGE DAY PLUS FIRE FLOW 126,564,495 Gallons

RATIO:	BASE	=	$\frac{107,165,571}{148,348,333}$	=	72.24%
	MAX DAY	=	100-BASE	=	27.76%

MAXIMUM HOUR SYSTEM DEMAND

AVERAGE HOUR ON MAX DAY 6,181,181 Gallons

MAXIMUM HOUR PUMPAGE 6,875,000 Gallons

AVERAGE HOUR
PLUS ONE HOUR FIRE FLOW 5,542,950 Gallons

RATIO:	BASE	=	$\frac{107,165,571}{165,000,000}$	=	64.95%	Use
						64.95%
	MAX HOUR	=	100-BASE	=	35.05%	Use
						35.05%

**MILWAUKEE WATER WORKS
ALLOCATION OF UTILITY FINANCED PLANT
TO SERVICE COST FUNCTIONS**

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		TOTAL (\$)	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT. (\$)
			SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
	INTANGIBLE PLANT												
301	Organization	0	0	0	0	0	0	0	0	0	0	0	0
302	Franchises and consents	0	0	0	0	0	0	0	0	0	0	0	0
303	Miscellaneous intangible plant	0	0	0	0	0	0	0	0	0	0	0	0
	SOURCE OF SUPPLY												
310	Land and land rights	0	0		0								
311	Structures and improvements	0	0		0								
312	Collecting and impounding reservoirs	0	0		0								
313	Lake, river, and other intakes	16,080,676	11,616,543		4,464,133								
314	Wells and springs	0	0		0								
316	Supply mains	5,618,708	4,058,907		1,559,801								
317	Other water source plant	0	0		0								
	PUMPING PLANT												
320	Land and land rights	319,551	230,841		88,710								
321	Structures and improvements	7,970,097	5,757,530		2,212,567								
323	Other power production equipment	0	0		0								
325	Electric pumping equipment (fully dep)	7,756,254	5,603,052		2,153,202								
325	Electric pumping equipment	21,804,106	15,751,100		6,053,006								
326	Diesel pumping equipment	0	0		0								
328	Other pumping equipment	0	0		0								
	WATER TREATMENT PLANT												
330	Land and land rights	914,137	660,365		253,772								
331	Structures and improvements	17,155,910	12,393,283		4,762,627								
332	Sand or Other Media Filtration Equip	37,380,845	27,003,604		10,377,241								
333	Membrane Filtration Equipment	0	0		0								
334	Other Water Treatment Equipment	63,300,000	45,727,380		17,572,620								

MILWAUKEE WATER WORKS
ALLOCATION OF UTILITY FINANCED PLANT
TO SERVICE COST FUNCTIONS
(continued)

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY								CUSTOMER COSTS			FIRE PROTECT. (\$)
		BASE COSTS			MAX DAY		MAX HOUR			BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
		TOTAL (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)				
TRANSMISSION & DISTRIBUTION PLANT													
340	Land and land rights	29,629	6,470	8,947	2,313	0	935	4,828	243	0	3,265	0	2,628
341	Structures and improvements	0	0	0	0	0	0	0	0	0	0	0	0
342	Distribution reservoirs and standpipes	7,955,123	5,166,759						2,788,364				
343	Transmission mains	106,125,142	68,927,039		26,488,040		10,710,064						
343	Distribution mains	157,758,059		102,462,015				55,296,044					
345	Services	0										0	
346	Meters	37,392,788									37,392,788		
348	Hydrants	30,093,512											30,093,512
349	Other transmission and distr. plant	0	0	0	0	0	0	0	0	0	0	0	0
GENERAL PLANT													
389	Land and land rights	99,760	39,103	19,748	14,644	0	2,064	10,657	537	0	7,207	0	5,800
390	Structures and improvements	3,671,634	1,439,155	726,809	538,970	0	75,971	392,240	19,779	0	265,244	0	213,467
391	Office furniture and equipment	1,992,584	781,025	394,437	292,497	0	41,229	212,867	10,734	0	143,947	0	115,848
391	Office furniture & equip - Computers	3,376,445	1,323,451	668,375	495,638	0	69,863	360,705	18,189	0	243,919	0	196,305
392	Transportation equipment (fully dep.)	6,710,882	2,630,436	1,328,435	985,110	0	138,858	716,921	36,152	0	484,803	0	390,167
392	Transportation equipment	955,444	374,501	189,132	140,252	0	19,769	102,070	5,147	0	69,023	0	55,549
393	Stores equipment	0	0	0	0	0	0	0	0	0	0	0	0
394	Tools, shop and garage equipment	1,300,762	509,854	257,489	190,943	0	26,915	138,960	7,007	0	93,969	0	75,626
395	Laboratory equipment	647,147	253,659	128,104	94,997	0	13,390	69,135	3,486	0	46,751	0	37,625
396	Power Operated Equip (fully dep.)	66,199	25,948	13,104	9,718	0	1,370	7,072	357	0	4,782	0	3,849
396	Power operated equipment	2,465,031	966,208	487,959	361,849	0	51,005	263,338	13,279	0	178,077	0	143,315
397	Communication equipment	2,753,242	1,079,177	545,011	404,156	0	56,968	294,128	14,832	0	198,898	0	160,072
397	SCADA equipment	1,848,641	724,604	365,943	271,367	0	38,251	197,490	9,959	0	133,548	0	107,479
398	Miscellaneous equipment	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		543,542,307	213,049,993	107,595,508	79,788,174	0	11,246,653	58,066,455	2,928,065	0	39,266,220	0	31,601,239

**MILWAUKEE WATER WORKS
ALLOCATION OF TOTAL PLANT TO
SERVICE COST FUNCTIONS**

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY												
		TOTAL (\$)	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS				FIRE PROTECT. (\$)
			SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)		
INTANGIBLE PLANT														
301	Organization	0	0	0	0	0	0	0	0	0	0	0	0	
302	Franchises and consents	0	0	0	0	0	0	0	0	0	0	0	0	
303	Miscellaneous intangible plant	0	0	0	0	0	0	0	0	0	0	0	0	
SOURCE OF SUPPLY														
310	Land and land rights	0	0		0									
311	Structures and improvements	0	0		0									
312	Collecting and impounding reservoirs	0	0		0									
313	Lake, river, and other intakes	16,080,676	11,616,543		4,464,133									
314	Wells and springs	0	0		0									
316	Supply mains	5,618,708	4,058,907		1,559,801									
317	Other water source plant	0	0		0									
PUMPING PLANT														
320	Land and land rights	319,551	230,841		88,710									
321	Structures and improvements	7,970,097	5,757,530		2,212,567									
323	Other power production equipment	0	0		0									
325	Electric pumping equipment (fully dep)	7,756,254	5,603,052		2,153,202									
325	Electric pumping equipment	21,804,106	15,751,100		6,053,006									
326	Diesel pumping equipment	0	0		0									
328	Other pumping equipment	0	0		0									
WATER TREATMENT PLANT														
330	Land and land rights	914,137	660,365		253,772									
331	Structures and improvements	17,155,910	12,393,283		4,762,627									
332	Sand or Other Media Filtration Equip	37,380,845	27,003,604		10,377,241									
333	Membrane Filtration Equipment	0	0		0									
334	Other Water Treatment Equipment	63,300,000	45,727,380		17,572,620									

MILWAUKEE WATER WORKS
ALLOCATION OF TOTAL PLANT TO
SERVICE COST FUNCTIONS
(continued)

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		TOTAL (\$)	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT. (\$)
			SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
TRANSMISSION & DISTRIBUTION PLANT													
340	Land and land rights	29,629	6,222	9,510	2,253	0	911	5,132	194	0	2,753	0	2,655
341	Structures and improvements	0	0	0	0	0	0	0	0	0	0	0	0
342	Distribution reservoirs and standpipes	7,955,123	5,166,759						2,788,364				
343	Transmission mains	129,919,955	84,381,491		32,427,046		13,111,417						
343	Distribution mains	210,747,378		136,877,958				73,869,420					
345	Services	0										0	
346	Meters	39,629,580									39,629,580		
348	Hydrants	38,207,894											38,207,894
349	Other transmission and distr. plant	0	0	0	0	0	0	0	0	0	0	0	0
GENERAL PLANT													
389	Land and land rights	99,760	36,018	22,580	13,514	0	2,163	12,186	460	0	6,537	0	6,303
390	Structures and improvements	3,671,634	1,325,630	831,034	497,373	0	79,604	448,487	16,929	0	240,605	0	231,973
391	Office furniture and equipment	1,992,584	719,415	450,999	269,923	0	43,201	243,392	9,187	0	130,576	0	125,891
391	Office furniture & equip - Computers	3,376,445	1,219,053	764,221	457,385	0	73,204	412,430	15,568	0	221,261	0	213,323
392	Transportation equipment (fully dep.)	6,710,882	2,422,938	1,518,934	909,080	0	145,497	819,728	30,942	0	439,769	0	423,993
392	Transportation equipment	955,444	344,959	216,254	129,428	0	20,715	116,707	4,405	0	62,611	0	60,365
393	Stores equipment	0	0	0	0	0	0	0	0	0	0	0	0
394	Tools, shop and garage equipment	1,300,762	469,635	294,413	176,206	0	28,202	158,887	5,998	0	85,240	0	82,182
395	Laboratory equipment	647,147	233,650	146,475	87,665	0	14,031	79,048	2,984	0	42,408	0	40,887
396	Power Operated Equip (fully dep.)	66,199	23,901	14,983	8,968	0	1,435	8,086	305	0	4,338	0	4,182
396	Power operated equipment	2,465,031	889,990	557,932	333,922	0	53,444	301,101	11,366	0	161,535	0	155,740
397	Communication equipment	2,753,242	994,048	623,166	372,964	0	59,692	336,306	12,695	0	180,422	0	173,949
397	SCADA equipment	1,848,641	667,445	418,419	250,423	0	40,080	225,810	8,524	0	121,143	0	116,797
398	Miscellaneous equipment	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		630,677,613	227,703,758	142,746,877	85,433,828	0	13,673,595	77,036,721	2,907,920	0	41,328,778	0	39,846,134

**MILWAUKEE WATER WORKS
ALLOCATION OF DEPRECIATION EXPENSE TO
SERVICE COST FUNCTIONS**

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		TOTAL (\$)	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT. (\$)
			SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
	INTANGIBLE PLANT												
301	Organization	0	0	0	0	0	0	0	0	0	0	0	0
302	Franchises and consents	0	0	0	0	0	0	0	0	0	0	0	0
303	Miscellaneous intangible plant	0	0	0	0	0	0	0	0	0	0	0	0
	SOURCE OF SUPPLY												
310	Land and land rights	0	0		0								
311	Structures and improvements	0	0		0								
312	Collecting and impounding reservoirs	0	0		0								
313	Lake, river, and other intakes	273,371	197,481		75,890								
314	Wells and springs	0	0		0								
316	Supply mains	101,137	73,061		28,076								
317	Other water source plant	0	0		0								
	PUMPING PLANT												
320	Land and land rights	0	0		0								
321	Structures and improvements	255,043	184,241		70,802								
323	Other power production equipment	0	0		0								
325	Electric pumping equipment (fully dep)	0	0		0								
325	Electric pumping equipment	959,381	693,049		266,332								
326	Diesel pumping equipment	0	0		0								
328	Other pumping equipment	0	0		0								
	WATER TREATMENT PLANT												
330	Land and land rights	0	0		0								
331	Structures and improvements	548,989	396,585		152,404								
332	Sand or Other Media Filtration Equip	1,233,568	891,119		342,449								
333	Membrane Filtration Equipment	0	0		0								
334	Other Water Treatment Equipment	3,798,000	2,743,643		1,054,357								

MILWAUKEE WATER WORKS
ALLOCATION OF DEPRECIATION EXPENSE TO
SERVICE COST FUNCTIONS
(continued)

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		TOTAL	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT.
			SYSTEM	DISTRIB.	SYSTEM	DISTRIB.	SYSTEM	DISTRIB.	STORAGE	BILLING	EQUIV. METER	EQUIV. SERVICE	
		(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
TRANSMISSION & DISTRIBUTION PLANT													
340	Land and land rights	0	0	0	0	0	0	0	0	0	0	0	0
341	Structures and improvements	0	0	0	0	0	0	0	0	0	0	0	0
342	Distribution reservoirs and standpipes	151,147	98,168						52,979				
343	Transmission mains	1,379,627	896,052		344,345		139,231						
343	Distribution mains	2,050,855		1,332,006				718,849					
345	Services	0										0	
346	Meters	816,354									816,354		
348	Hydrants	662,057											662,057
349	Other transmission and distr. plant	0	0	0	0	0	0	0	0	0	0	0	0
GENERAL PLANT													
389	Land and land rights	0	0	0	0	0	0	0	0	0	0	0	0
390	Structures and improvements	74,646	37,681	8,130	14,250	0	850	4,388	323	0	4,983	0	4,041
391	Office furniture and equipment	94,162	47,532	10,256	17,976	0	1,072	5,535	408	0	6,286	0	5,098
391	Office furniture & equip - Computers	655,067	330,674	71,348	125,054	0	7,458	38,505	2,838	0	43,727	0	35,463
392	Transportation equipment (fully dep.)	0	0	0	0	0	0	0	0	0	0	0	0
392	Transportation equipment	168,876	85,248	18,394	32,239	0	1,923	9,926	732	0	11,273	0	9,142
393	Stores equipment	0	0	0	0	0	0	0	0	0	0	0	0
394	Tools, shop and garage equipment	75,444	38,084	8,217	14,402	0	859	4,435	327	0	5,036	0	4,084
395	Laboratory equipment	37,535	18,947	4,088	7,166	0	427	2,206	163	0	2,506	0	2,032
396	Power Operated Equip (fully dep.)	0	0	0	0	0	0	0	0	0	0	0	0
396	Power operated equipment	184,877	93,325	20,136	35,294	0	2,105	10,867	801	0	12,341	0	10,008
397	Communication equipment	429,111	216,613	46,738	81,919	0	4,885	25,223	1,859	0	28,644	0	23,230
397	SCADA equipment	160,185	80,860	17,447	30,580	0	1,824	9,416	694	0	10,693	0	8,672
398	Miscellaneous equipment	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		14,109,432	7,122,362	1,536,760	2,693,535	0	160,633	829,349	61,123	0	941,842	0	763,827

**MILWAUKEE WATER WORKS
ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES TO
SERVICE COST FUNCTIONS**

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT.	
		TOTAL (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)		EQUIV. SERVICE (\$)
	SOURCE OF SUPPLY												
600	Operation labor	0	0		0								
601	Operation labor and expenses	0	0		0								
602	Purchased water	0	0										0
603	Miscellaneous expenses	0	0		0								
604	Rents	0	0		0								
610	Maintenance supervision and engineering	0	0		0								
611	Maintenance of structures and improvements	0	0		0								
612	Maint. of collecting and impounding reservoirs	0	0		0								
613	Maintenance of lake, river, and other intakes	0	0		0								
614	Maintenance of wells and springs	0	0		0								
616	Maintenance of supply mains	0	0		0								
617	Maintenance of misc. water source plant	0	0		0								
	PUMPING EXPENSES												
620	Operation supervision and engineering	0	0		0								
621	Fuel for power production	0	0										
622	Power production labor and expenses	0	0										
623	Fuel or power purchased for production	5,828,819	3,785,750					2,043,069					
624	Pumping labor and expenses	350,347	253,088		97,259								
625	Expenses transferred--credit	0	0		0								
626	Miscellaneous expenses	84,690	61,180		23,511								
627	Rents	0	0		0								
630	Maintenance supervision and engineering	188,452	136,136		52,316								
631	Maintenance of structures and improvements	160,000	115,583		44,417								
632	Maintenance of power production equipment	0	0		0								
633	Maintenance of pumping equipment	615,138	444,371		170,768								
	WATER TREATMENT EXPENSES												
640	Operation supervision and engineering	459,348	331,829		127,519								
641	Chemicals	2,551,781	2,551,781										
642	Operation labor and expenses	4,208,769	3,040,379		1,168,390								
643	Miscellaneous expenses	853,003	616,202		236,801								
644	Rents	0	0		0								
650	Maintenance supervision and engineering	189,393	136,816		52,577								
651	Maintenance of structures and improvements	797,227	575,910		221,317								
652	Maintenance of water treatment equipment	3,242,921	2,342,658		900,262								

MILWAUKEE WATER WORKS
ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES TO
SERVICE COST FUNCTIONS
(continued)

ACCT NO.	ACCOUNT DESCRIPTION	EXTRA-CAPACITY											
		BASE COSTS			MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT. (\$)
		TOTAL (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
TRANS & DISTRIBUTION EXPENSES													
660	Operation supervision and engineering	961,307	82,853	268,720	22,430	0	9,069	145,021	13,214	0	78,230	267,738	74,032
661	Storage facilities expenses	0	0						0				
662	Transmission lines expenses	216,486	140,605		54,033		21,848						
662	Distribution lines expenses	996,691		647,339				349,352					
663	Meter expenses	750,646									750,646		
664	Customer installations expenses	0										0	
665	Miscellaneous expenses	1,419,935	122,381	396,923	33,131	0	13,396	214,209	19,518	0	115,553	395,472	109,351
666	Rents	1,271,731	109,607	355,495	29,673	0	11,998	191,851	17,481	0	103,493	354,195	97,938
670	Maintenance supervision and engineering	0	0	0	0	0	0	0	0	0	0	0	0
671	Maintenance of structures and improvements	0	0	0	0	0	0	0	0	0	0	0	0
672	Maintenance of distr.reservoirs and standpipes	499,999	324,743						175,255				
673	Maintenance of transmission mains	975,400	633,511		243,453		98,437						
673	Maintenance of distribution mains	4,490,687		2,916,649				1,574,038					
675	Maintenance of services	3,550,958										3,550,958	
676	Maintenance of meters	286,910									286,910		
677	Maintenance of hydrants	981,869											981,869
678	Maintenance of miscellaneous plant	141,639	12,207	39,593	3,305	0	1,336	21,367	1,947	0	11,526	39,448	10,908
CUSTOMER ACCOUNTS EXPENSES													
901	Supervision	99,230								99,230			
902	Meter reading labor	157,028								157,028			
903	Customer records and collection expenses	634,960								634,960			
904	Uncollectible accounts	90,000								90,000			
905	Miscellaneous customer accounts expenses	0								0			
906	Customer service and information expenses	10,320								10,320			
SALES EXPENSES													
910	Sales Expenses	0								0			
ADMINISTRATIVE & GENERAL EXPENSES													
920	Administrative and general salaries	2,250,229	743,672	362,791	273,083	0	12,244	195,788	17,840	77,782	105,616	361,464	99,948
921	Office supplies and expenses	308,334	101,900	49,711	37,419	0	1,678	26,828	2,444	10,658	14,472	49,529	13,695
922	Administrative expenses transferred -- credit	0	0	0	0	0	0	0	0	0	0	0	0
923	Outside services employed	1,740,896	575,344	280,674	211,272	0	9,473	151,472	13,802	60,176	81,710	279,648	77,325
924	Property insurance	36,291	13,103	8,214	4,916	0	787	4,433	167	0	2,378	0	2,293
925	Injuries and damages	676,532	223,585	109,073	82,103	0	3,681	58,864	5,364	23,385	31,754	108,674	30,049
926	Employee pensions and benefits	6,466,999	2,137,262	1,042,634	784,822	0	35,189	562,682	51,270	223,540	303,534	1,038,822	287,243
928	Regulatory commission expenses	175,000	57,835	28,214	21,238	0	952	15,226	1,387	6,049	8,214	28,111	7,773
929	Duplicate charges -- credit	0	0	0	0	0	0	0	0	0	0	0	0
930	Miscellaneous general expenses	105,250	34,784	16,969	12,773	0	573	9,158	834	3,638	4,940	16,907	4,675
931	Rents	179,575	59,347	28,952	21,793	0	977	15,625	1,424	6,207	8,429	28,846	7,976
932	Maintenance of general plant	23,878	7,891	3,850	2,898	0	130	2,078	189	825	1,121	3,836	1,061
TOTAL OPERATION & MAINTENANCE EXPENSES		49,028,672	19,772,314	6,555,801	4,933,478	0	2,264,836	3,537,993	322,138	1,403,801	1,908,527	6,523,649	1,806,136

**MILWAUKEE WATER WORKS
SUMMARY OF ALLOCATION OF OPERATING COSTS TO SERVICE COST FUNCTIONS**

OPERATING COST	EXTRA-CAPACITY											
	TOTAL (\$)	BASE COSTS		MAX DAY		MAX HOUR			CUSTOMER COSTS			FIRE PROTECT. (\$)
		SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	SYSTEM (\$)	DISTRIB. (\$)	STORAGE (\$)	BILLING (\$)	EQUIV. METER (\$)	EQUIV. SERVICE (\$)	
OPERATION AND MAINTENANCE	49,028,672	19,772,314	6,555,801	4,933,478	0	2,264,836	3,537,993	322,138	1,403,801	1,908,527	6,523,649	1,806,136
DEPRECIATION EXPENSE	14,109,432	7,122,362	1,536,760	2,693,535	0	160,633	829,349	61,123	0	941,842	0	763,827
TAXES AND TAX EQUIVALENT	13,656,828	4,930,746	3,091,071	1,850,002	0	296,091	1,668,170	62,969	0	894,942	0	862,837
RETURN ON NET INVESTMENT RATE BASE	18,068,552	7,237,456	3,493,238	2,674,543	0	377,983	1,885,208	95,339	0	1,278,807	0	1,025,978
TOTAL	94,863,483	39,062,879	14,676,870	12,151,559	0	3,099,543	7,920,720	541,568	1,403,801	5,024,118	6,523,649	4,458,778

MILWAUKEE WATER WORKS
CUSTOMER CLASS DEMAND RATIOS

CUSTOMER CLASS	BASE COSTS					EXTRA-CAPACITY MAX DAY DEMAND					EXTRA-CAPACITY MAX HOUR DEMAND					
	ANNUAL VOLUME 100 CCF	AVERAGE DAY VOLUME CCF	PERCENT (%)	SYSTEM ADJUST. PERCENT (%)	DISTR. ADJUST. PERCENT (%)	EXTRA CAPACITY RATIO	VOLUME RATE CCF PER DAY	PERCENT (%)	ADJUST. ALLOC. OF MD SYSTEM COSTS (%)	ADJUST. ALLOC. OF MD DISTR. COSTS (%)	EXTRA CAPACITY RATIO	VOLUME RATE CCF PER HOUR	PERCENT (%)	ADJUST. ALLOC. OF MH SYSTEM COSTS (%)	ADJUST. ALLOC. OF MH DISTR. COSTS (%)	ADJUST. ALLOC. OF MH STORAGE COSTS (%)
URBAN RESIDENTIAL	12,865,000	3,524,658	30.99%	30.99%	41.67%	1.00	3,524,658	27.59%	27.59%	33.60%	2.50	367,152	28.85%	28.85%	35.73%	34.85%
URBAN COMMERCIAL	9,027,000	2,473,151	21.75%	21.75%	29.24%	1.00	2,473,151	19.36%	19.36%	23.58%	2.75	283,382	22.27%	22.27%	27.58%	26.89%
URBAN INDUSTRIAL	4,060,000	1,112,329	9.78%	9.78%	13.15%	0.60	667,397	5.22%	5.22%	6.36%	1.20	55,616	4.37%	4.37%	5.41%	5.28%
URBAN PUBLIC AUTHORITY	2,296,000	629,041	5.53%	5.53%	7.44%	1.00	629,041	4.92%	4.92%	6.00%	4.25	111,393	8.75%	8.75%	10.84%	10.57%
SUBURBAN RESIDENTIAL	1,151,000	315,342	2.77%	2.77%	3.73%	1.00	315,342	2.47%	2.47%	3.01%	2.50	32,848	2.58%	2.58%	3.20%	3.12%
SUBURBAN COMMERCIAL	999,000	273,699	2.41%	2.41%	3.24%	1.00	273,699	2.14%	2.14%	2.61%	2.75	31,361	2.46%	2.46%	3.05%	2.98%
SUBURBAN INDUSTRIAL	39,000	10,685	0.09%	0.09%	0.13%	0.60	6,411	0.05%	0.05%	0.06%	1.20	534	0.04%	0.04%	0.05%	0.05%
SUBURBAN PUBLIC AUTHORITY	23,000	6,301	0.06%	0.06%	0.07%	1.00	6,301	0.05%	0.05%	0.06%	4.25	1,116	0.09%	0.09%	0.11%	0.11%
WEST MILWAUKEE RESIDENTIAL	83,000	22,740	0.20%	0.20%	0.00%	1.00	22,740	0.18%	0.18%	0.00%	2.50	2,369	0.19%	0.19%	0.00%	0.22%
WEST MILWAUKEE COMMERCIAL	89,000	24,384	0.21%	0.21%	0.00%	1.00	24,384	0.19%	0.19%	0.00%	2.75	2,794	0.22%	0.22%	0.00%	0.27%
WEST MILWAUKEE INDUSTRIAL	367,000	100,548	0.88%	0.88%	0.00%	0.60	60,329	0.47%	0.47%	0.00%	1.20	5,027	0.40%	0.40%	0.00%	0.48%
WEST MILWAUKEE PUBLIC AUTHORITY	0	0	0.00%	0.00%	0.00%	1.00	0	0.00%	0.00%	0.00%	4.25	0	0.00%	0.00%	0.00%	0.00%
BROWN DEER	621,000	170,137	1.50%	1.50%	0.00%	0.82	139,512	1.09%	1.09%	0.00%	2.88	20,416	1.60%	1.60%	0.00%	0.00%
BUTLER	152,000	41,644	0.37%	0.37%	0.00%	0.49	20,405	0.16%	0.16%	0.00%	2.75	4,772	0.37%	0.37%	0.00%	0.00%
GREENDALE	554,000	151,781	1.33%	1.33%	0.00%	1.46	221,600	1.73%	1.73%	0.00%	3.49	22,071	1.73%	1.73%	0.00%	0.00%
MENOMONEE FALLS	1,450,000	397,260	3.49%	3.49%	0.00%	0.75	297,945	2.33%	2.33%	0.00%	1.95	32,277	2.54%	2.54%	0.00%	0.00%
MEQUON	444,000	121,644	1.07%	1.07%	0.00%	1.23	149,622	1.17%	1.17%	0.00%	2.08	10,542	0.83%	0.83%	0.00%	0.00%
NEW BERLIN	1,209,000	331,233	2.91%	2.91%	0.00%	0.83	274,923	2.15%	2.15%	0.00%	1.16	16,010	1.26%	1.26%	0.00%	0.00%
SHOREWOOD	620,000	169,863	1.49%	1.49%	0.00%	0.83	140,986	1.10%	1.10%	0.00%	2.26	15,995	1.26%	1.26%	0.00%	1.52%
WAUWATOSA	2,180,000	597,260	5.25%	5.25%	0.00%	0.81	483,781	3.79%	3.79%	0.00%	2.13	53,007	4.16%	4.16%	0.00%	0.00%
WEST ALLIS	2,510,000	687,671	6.05%	6.05%	0.00%	0.51	350,712	2.75%	2.75%	0.00%	1.70	48,710	3.83%	3.83%	0.00%	0.00%
COUNTY INSTITUTIONS	358,000	98,082	0.86%	0.86%	0.00%	1.00	98,082	0.77%	0.77%	0.00%	2.75	11,239	0.88%	0.88%	0.00%	0.00%
PUBLIC FIRE PROTECTION	415,121	113,732	1.00%	1.00%	1.34%		2,593,439	20.30%	20.30%	24.72%		144,080	11.32%	11.32%	14.02%	13.67%
TOTALS	41,512,121	11,373,184	100.00%	100.00%	100.00%		12,774,461	100.00%	100.00%	100.00%		1,272,712	100.00%	100.00%	100.00%	100.00%

50%

50%

-- Public Fire % Limits -->

50%

50%

80%

MAXIMUM DAY DEMAND = 21,440,474 (CUBIC FEET/DAY)

MAXIMUM HOUR DEMAND = 1,597,776 (CUBIC FEET/HR)

1.08 = NON-COINCIDENT / COINCIDENT RATIO FOR MAX DAY

1.74 = NON-COINCIDENT / COINCIDENT RATIO FOR MAX HOUR

SUM OF GENERAL SERVICE AVERAGE AND MAXIMUM DAY EXTRA CAPACITY DEMAND

SUM OF GENERAL SERVICE AVERAGE AND MAXIMUM HOUR EXTRA CAPACITY DEMAND

**MILWAUKEE WATER WORKS
CUSTOMER CLASS ALLOCATION FACTORS
NUMBER OF METERS**

<u>Meter size (inches):</u>	<u>5/8</u>	<u>3/4</u>	<u>1</u>	<u>1-1/4</u>	<u>1-1/2</u>	<u>2</u>	<u>2-1/2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>8</u>	<u>10</u>	<u>12</u>	TOTAL METERS	PERCENT
URBAN RESIDENTIAL	89,777	34,846	1,202	0	79	18	0	0	0	0	0	0	0	125,922	80.17%
URBAN COMMERCIAL	3,967	2,576	2,750	1	2,019	1,147	0	377	225	80	18	8	0	13,168	8.38%
URBAN INDUSTRIAL	232	226	175	0	191	211	0	88	54	33	6	2	0	1,218	0.78%
URBAN PUBLIC AUTHORITY	65	72	254	0	97	170	0	147	88	52	14	3	0	962	0.61%
SUBURBAN RESIDENTIAL	10,279	2,535	130	0	53	2	0	0	0	0	0	0	0	12,999	8.28%
SUBURBAN COMMERCIAL	434	159	451	0	461	80	0	31	18	13	18	1	0	1,666	1.06%
SUBURBAN INDUSTRIAL	7	3	9	0	10	5	0	3	1	1	1	0	0	40	0.03%
SUBURBAN PUBLIC AUTHORITY	0	0	0	0	0	2	0	0	1	1	0	0	0	4	0.00%
WEST MILWAUKEE RESIDENTIAL	444	341	13	0	1	1	0	0	0	0	0	0	0	800	0.51%
WEST MILWAUKEE COMMERCIAL	58	38	50	0	28	8	0	3	3	2	3	0	0	193	0.12%
WEST MILWAUKEE INDUSTRIAL	9	17	2	0	10	8	0	5	6	4	0	2	0	63	0.04%
WEST MILWAUKEE PUBLIC AUTHORITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
BROWN DEER	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0.00%
BUTLER	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.00%
GREENDALE	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0.00%
MENOMONEE FALLS	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0.00%
MEQUON	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0.00%
NEW BERLIN	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0.00%
SHOREWOOD	0	0	0	0	0	0	0	0	0	0	1	0	2	3	0.00%
WAUWATOSA	0	0	0	0	0	0	0	0	0	0	2	2	2	6	0.00%
WEST ALLIS	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0.00%
COUNTY INSTITUTIONS	0	0	0	0	0	0	0	0	0	0	1	0	2	3	0.00%
WHOLESALE														0	0.00%
WHOLESALE														0	0.00%
TOTALS	105,272	40,813	5,036	1	2,949	1,652	0	654	396	188	78	26	6	157,071	100.00%

**MILWAUKEE WATER WORKS
CUSTOMER CLASS ALLOCATION FACTORS
EQUIVALENT METERS**

ALLOCATION FACTOR: Meter size (inches): <u>Equiv. meters ratio:</u>	5/8 1.0	3/4 1.0	1 2.5	1-1/4 2.5	1-1/2 5.0	2 8.0	2-1/2 12.5	3 15.0	4 25.0	6 50.0	8 80.0	10 120.0	12 160.0	TOTAL EQUIV. METERS	PERCENT
URBAN RESIDENTIAL	89,777	34,846	3,005	0	395	144	0	0	0	0	0	0	0	128,167	56.69%
URBAN COMMERCIAL	3,967	2,576	6,875	3	10,095	9,176	0	5,655	5,625	4,000	1,440	960	0	50,372	22.28%
URBAN INDUSTRIAL	232	226	438	0	955	1,688	0	1,320	1,350	1,650	480	240	0	8,579	3.79%
URBAN PUBLIC AUTHORITY	65	72	635	0	485	1,360	0	2,205	2,200	2,600	1,120	360	0	11,102	4.91%
SUBURBAN RESIDENTIAL	10,279	2,535	325	0	265	16	0	0	0	0	0	0	0	13,420	5.94%
SUBURBAN COMMERCIAL	434	159	1,128	0	2,305	640	0	465	450	650	1,440	120	0	7,791	3.45%
SUBURBAN INDUSTRIAL	7	3	23	0	50	40	0	45	25	50	80	0	0	323	0.14%
SUBURBAN PUBLIC AUTHORITY	0	0	0	0	0	16	0	0	25	50	0	0	0	91	0.04%
WEST MILWAUKEE RESIDENTIAL	444	341	33	0	5	8	0	0	0	0	0	0	0	831	0.37%
WEST MILWAUKEE COMMERCIAL	58	38	125	0	140	64	0	45	75	100	240	0	0	885	0.39%
WEST MILWAUKEE INDUSTRIAL	9	17	5	0	50	64	0	75	150	200	0	240	0	810	0.36%
WEST MILWAUKEE PUBLIC AUTHORITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
BROWN DEER	0	0	0	0	0	0	0	0	0	0	320	0	0	320	0.14%
BUTLER	0	0	0	0	0	0	0	0	0	100	0	0	0	100	0.04%
GREENDALE	0	0	0	0	0	0	0	0	0	0	160	240	0	400	0.18%
MENOMONEE FALLS	0	0	0	0	0	0	0	0	0	0	160	240	0	400	0.18%
MEQUON	0	0	0	0	0	0	0	0	0	0	160	0	0	160	0.07%
NEW BERLIN	0	0	0	0	0	0	0	0	0	0	320	0	0	320	0.14%
SHOREWOOD	0	0	0	0	0	0	0	0	0	0	80	0	320	400	0.18%
WAUWATOSA	0	0	0	0	0	0	0	0	0	0	160	240	320	720	0.32%
WEST ALLIS	0	0	0	0	0	0	0	0	0	0	0	480	0	480	0.21%
COUNTY INSTITUTIONS	0	0	0	0	0	0	0	0	0	0	80	0	320	400	0.18%
WHOLESALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
WHOLESALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
TOTALS	105,272	40,813	12,590	3	14,745	13,216	0	9,810	9,900	9,400	6,240	3,120	960	226,069	100.00%

**MILWAUKEE WATER WORKS
CUSTOMER CLASS ALLOCATION FACTORS
EQUIVALENT SERVICES**

ALLOCATION FACTOR:														TOTAL	
Meter size (inches):	5/8	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12	EQUIV.	
Equiv. services ratio:	1.0	1.0	1.3	1.3	2.0	3.0	3.5	4.0	5.0	6.0	7.0	8.0	9.0	SERVICES	PERCENT
URBAN RESIDENTIAL	89,777	34,846	1,563	0	158	54	0	0	0	0	0	0	0	126,398	74.34%
URBAN COMMERCIAL	3,967	2,576	3,575	1	4,038	3,441	0	1,508	1,125	480	126	64	0	20,901	12.29%
URBAN INDUSTRIAL	232	226	228	0	382	633	0	352	270	198	42	16	0	2,579	1.52%
URBAN PUBLIC AUTHORITY	65	72	330	0	194	510	0	588	440	312	98	24	0	2,633	1.55%
SUBURBAN RESIDENTIAL	10,279	2,535	169	0	106	6	0	0	0	0	0	0	0	13,095	7.70%
SUBURBAN COMMERCIAL	434	159	586	0	922	240	0	124	90	78	126	8	0	2,767	1.63%
SUBURBAN INDUSTRIAL	7	3	12	0	20	15	0	12	5	6	7	0	0	87	0.05%
SUBURBAN PUBLIC AUTHORITY	0	0	0	0	0	6	0	0	5	6	0	0	0	17	0.01%
WEST MILWAUKEE RESIDENTIAL	444	341	17	0	2	3	0	0	0	0	0	0	0	807	0.47%
WEST MILWAUKEE COMMERCIAL	58	38	65	0	56	24	0	12	15	12	21	0	0	301	0.18%
WEST MILWAUKEE INDUSTRIAL	9	17	3	0	20	24	0	20	30	24	0	16	0	163	0.10%
WEST MILWAUKEE PUBLIC AUTHORITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
BROWN DEER	0	0	0	0	0	0	0	0	0	0	28	0	0	28	0.02%
BUTLER	0	0	0	0	0	0	0	0	0	12	0	0	0	12	0.01%
GREENDALE	0	0	0	0	0	0	0	0	0	0	14	16	0	30	0.02%
MENOMONEE FALLS	0	0	0	0	0	0	0	0	0	0	14	16	0	30	0.02%
MEQUON	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0.01%
NEW BERLIN	0	0	0	0	0	0	0	0	0	0	28	0	0	28	0.02%
SHOREWOOD	0	0	0	0	0	0	0	0	0	0	7	0	18	25	0.01%
WAUWATOSA	0	0	0	0	0	0	0	0	0	0	14	16	18	48	0.03%
WEST ALLIS	0	0	0	0	0	0	0	0	0	0	0	32	0	32	0.02%
COUNTY INSTITUTIONS	0	0	0	0	0	0	0	0	0	0	7	0	18	25	0.01%
WHOLESALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
WHOLESALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
TOTALS	105,272	40,813	6,547	1	5,898	4,956	0	2,616	1,980	1,128	546	208	54	170,019	100.00%

MILWAUKEE WATER WORKS
ALLOCATION OF SERVICE COST FUNCTIONS TO CUSTOMER CLASSES

	TOTAL	URBAN RESIDENTIAL	URBAN COMMERCIAL	URBAN INDUSTRIAL	URBAN PUB AUTH	SUBURBAN RESIDENTIAL	SUBURBAN COMMERCIAL	SUBURBAN INDUSTRIAL	SUBURBAN PUB AUTH
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
BASE COSTS (INCLUDES SYSTEM FP):									
SYSTEM	39,062,879	12,006,633	8,424,709	3,789,112	2,142,808	1,074,204	932,346	36,398	21,465
DISTRIBUTION	14,676,870	6,115,537	4,291,096	1,929,971	1,091,432	547,142	474,887	18,539	10,933
EXTRA-CAPACITY COSTS (INCLUDES SYSTEM FP):									
MAXIMUM-DAY SYSTEM	12,151,559	3,329,583	2,336,273	630,460	594,226	297,890	258,551	6,056	5,953
MAXIMUM-DAY DISTRIBUTION	0	0	0	0	0	0	0	0	0
MAXIMUM-HOUR SYSTEM	3,099,543	890,450	687,284	134,886	270,160	79,666	76,060	1,296	2,706
MAXIMUM-HOUR DISTRIBUTION	7,920,720	2,830,323	2,184,552	428,739	858,711	253,222	241,760	4,118	8,602
MAXIMUM-HOUR STORAGE	541,568	188,614	145,580	28,571	57,225	16,875	16,111	274	573
CUSTOMER COSTS:									
BILLING (NO FP)	1,403,801	1,125,411	117,687	10,886	8,598	116,177	14,890	357	36
EQUIVALENT METERS (NO FP)	5,024,118	2,846,114	1,118,564	190,497	246,534	298,008	172,998	7,162	2,021
EQUIVALENT SERVICES (NO FP)	6,523,649	4,849,888	801,985	98,937	101,036	502,456	106,182	3,327	652
DIRECT FIRE PROTECTION	4,458,778								
TOTAL COST	94,863,483	34,182,552	20,107,728	7,242,060	5,370,730	3,185,641	2,293,784	77,527	52,942
LESS OTHER REVENUE ALLOC. (ALL RETAIL)	4,597,866	1,789,899	1,094,900	379,216	281,227	166,810	120,109	4,060	2,772
COST OF SERVICE	90,265,617	32,392,653	19,012,828	6,862,844	5,089,503	3,018,831	2,173,675	73,468	50,170
REVENUE AT PRESENT RATES	81,011,793	30,764,776	17,219,428	5,447,762	3,732,696	3,588,632	2,581,893	101,174	47,544
DIFFERENCE	9,253,824	1,627,877	1,793,400	1,415,082	1,356,807	(569,801)	(408,218)	(27,706)	2,626
PERCENT INCREASE/DECREASE	11.42%	5.29%	10.41%	25.98%	36.35%	-15.88%	-15.81%	-27.38%	5.52%

**MILWAUKEE WATER WORKS
ALLOCATION OF SERVICE COST FUNCTIONS TO CUSTOMER CLASSES**

	WEST MILWAUKEE RESIDENTIAL (\$)	WEST MILWAUKEE COMMERCIAL (\$)	WEST MILWAUKEE INDUSTRIAL (\$)	WEST MILWAUKEE PUB AUTH (\$)	BROWN DEER (\$)	BUTLER (\$)	GREENDALE (\$)	MENOMONEE FALLS (\$)
BASE COSTS:								
SYSTEM DISTRIBUTION	77,462 0	83,062 0	342,513 0	0 0	599,276 0	146,683 0	534,619 0	1,399,275 0
EXTRA-CAPACITY COSTS:								
MAXIMUM-DAY SYSTEM	21,481	23,034	56,990	0	137,180	20,064	217,895	292,963
MAXIMUM-DAY DISTRIBUTION	0	0	0	0	0	0	0	0
MAXIMUM-HOUR SYSTEM	5,745	6,776	12,193	0	50,632	11,833	54,736	80,046
MAXIMUM-HOUR DISTRIBUTION	0	0	0	0	0	0	0	0
MAXIMUM-HOUR STORAGE	1,217	1,435	2,583	0	0	0	0	0
CUSTOMER COSTS:								
BILLING	7,150	1,725	563	0	36	18	36	36
EQUIVALENT METERS	18,442	19,653	17,987	0	7,450	2,328	9,312	9,312
EQUIVALENT SERVICES	30,961	11,549	6,239	0	1,074	460	1,151	1,151
FIRE PROTECTION								
TOTAL COST	162,458	147,234	439,068	0	795,647	181,387	817,749	1,782,783
LESS OTHER REVENUE ALLOC. (ALL RETAIL)	8,507	7,710	22,991	0	0	0	0	0
COST OF SERVICE	153,951	139,525	416,077	0	795,647	181,387	817,749	1,782,783
REVENUE AT PRESENT RATES	159,882	154,334	431,322	0	641,303	148,860	584,342	1,407,682
DIFFERENCE	(5,931)	(14,809)	(15,245)	0	154,344	32,527	233,407	375,101
PERCENT INCREASE/DECREASE	-3.71%	-9.60%	-3.53%	NA	24.07%	21.85%	39.94%	26.65%

**MILWAUKEE WATER WORKS
ALLOCATION OF SERVICE COST FUNCTIONS TO CUSTOMER CLASSES**

	MEQUON (\$)	NEW BERLIN (\$)	SHOREWOOD (\$)	WAUWATOSA (\$)	WEST ALLIS (\$)	COUNTY INSTITUTIONS (\$)	BLANK (\$)	BLANK (\$)	PUBLIC FIRE PROTECTION (\$)
BASE COSTS:									
SYSTEM	428,468	1,166,706	598,311	2,103,737	2,422,193	345,476	0	0	387,424
DISTRIBUTION	0	0	0	0	0	0	0	0	197,333
EXTRA-CAPACITY COSTS:									
MAXIMUM-DAY SYSTEM	147,120	270,326	138,629	475,692	344,848	96,442	0	0	2,449,903
MAXIMUM-DAY DISTRIBUTION	0	0	0	0	0	0	0	0	0
MAXIMUM-HOUR SYSTEM	26,145	39,703	39,668	131,454	120,798	27,871	0	0	349,436
MAXIMUM-HOUR DISTRIBUTION	0	0	0	0	0	0	0	0	1,110,692
MAXIMUM-HOUR STORAGE	0	0	8,492	0	0	0	0	0	74,017
CUSTOMER COSTS:									
BILLING	18	36	27	54	36	27	0	0	
EQUIVALENT METERS	3,725	7,450	9,312	16,762	11,175	9,312	0	0	
EQUIVALENT SERVICES	537	1,074	959	1,842	1,228	959	0	0	
FIRE PROTECTION									4,458,778
TOTAL COST	606,012	1,485,295	795,398	2,729,540	2,900,277	480,088	0	0	9,027,584
LESS OTHER REVENUE ALLOC. (ALL RETAIL)	0	0	0	0	0	0	0	0	719,666
COST OF SERVICE	606,012	1,485,295	795,398	2,729,540	2,900,277	480,088	0	0	8,307,918
REVENUE AT PRESENT RATES	480,304	1,186,334	682,676	2,095,160	2,341,094	401,626	0	0	6,812,969
DIFFERENCE	125,708	298,961	112,722	634,380	559,183	78,462	0	0	1,494,949
PERCENT INCREASE/DECREASE	26.17%	25.20%	16.51%	30.28%	23.89%	19.54%			21.94%

MILWAUKEE WATER WORKS
ALLOCATION OF PUBLIC FIRE PROTECTION TO CUSTOMER CLASSES

	TOTAL	MILWAUKEE	GREENFIELD	HALES	ST. FRANCIS	WEST	BROWN	BUTLER
	(\$)	(\$)	(\$)	CORNERS	(\$)	MILWAUKEE	DEER	(\$)
				(\$)		(\$)	(\$)	
ESTIMATED FIRE FLOW	28,289,857	19,398,924	1,146,193	290,190	344,126	188,034	428,317	83,249
BASE COSTS								
SYSTEM	387,424	265,664	15,697	3,974	4,713	2,575	5,866	1,140
DISTRIBUTION	197,333	179,153	10,585	2,680	3,178	1,737	0	0
EXTRA-CAPACITY COSTS								
MAXIMUM-DAY SYSTEM	2,449,903	1,679,948	99,260	25,130	29,801	16,284	37,092	7,209
MAXIMUM-DAY DISTIBUTION	0	0	0	0	0	0	0	0
MAXIMUM-HOUR SYSTEM	349,436	239,615	14,158	3,584	4,251	2,323	5,291	1,028
MAXIMUM-HOUR DISTRIBUTION	1,110,692	1,017,319	60,109	15,218	18,047	0	0	0
MAXIMUM-HOUR STORAGE	74,017	65,779	3,887	984	1,167	638	0	0
CUSTOMER COSTS:								
BILLING								
EQUIVALENT METERS								
EQUIVALENT SERVICES								
DIRECT FIRE PROTECTION	4,458,778	4,047,999	239,178	60,554	71,809	39,237	0	0
TOTAL COST	9,027,584	7,495,478	442,873	112,125	132,966	62,793	48,249	9,378
LESS PRIVATE FIRE REVENUE	719,666	719,666	0	0	0	0	0	0
COST OF SERVICE	8,307,918	6,775,812	442,873	112,125	132,966	62,793	48,249	9,378
REVENUE AT PRESENT RATES	6,812,969	5,423,853	490,017	69,854	134,938	81,817	32,947	7,193
DIFFERENCE	1,494,949	1,351,959	(47,144)	42,272	(1,972)	(19,025)	15,302	2,185
PERCENT INCREASE/DECREASE	21.94%	24.93%	-9.62%	60.51%	-1.46%	-23.25%	46.44%	30.37%

**MILWAUKEE WATER WORKS
ALLOCATION OF PUBLIC FIRE PROTECTION TO CUSTOMER CLASSES**

	GREENDALE (\$)	MENOMONEE FALLS (\$)	MEQUON (\$)	NEW BERLIN (\$)	SHOREWOOD (\$)	WAUWATOSA (\$)	WEST ALLIS (\$)	COUNTY INSTITUTIONS (\$)
ESTIMATED FIRE FLOW	491,799	859,454	278,137	815,571	460,980	1,424,708	1,850,109	230,066
BASE COSTS								
SYSTEM	6,735	11,770	3,809	11,169	6,313	19,511	25,337	3,151
DISTRIBUTION	0	0	0	0	0	0	0	0
EXTRA-CAPACITY COSTS								
MAXIMUM-DAY SYSTEM	42,590	74,429	24,087	70,628	39,921	123,380	160,220	19,924
MAXIMUM-DAY DISTRIBUTION	0	0	0	0	0	0	0	0
MAXIMUM-HOUR SYSTEM	6,075	10,616	3,436	10,074	5,694	17,598	22,853	2,842
MAXIMUM-HOUR DISTRIBUTION	0	0	0	0	0	0	0	0
MAXIMUM-HOUR STORAGE	0	0	0	0	1,563	0	0	0
CUSTOMER COSTS:								
BILLING								
EQUIVALENT METERS								
EQUIVALENT SERVICES								
DIRECT FIRE PROTECTION	0	0	0	0	0	0	0	0
TOTAL COST	55,400	96,815	31,331	91,871	53,491	160,489	208,409	25,916
LESS PRIVATE FIRE REVENUE	0	0	0	0	0	0	0	0
COST OF SERVICE	55,400	96,815	31,331	91,871	53,491	160,489	208,409	25,916
REVENUE AT PRESENT RATES	38,498	89,510	21,362	72,285	38,078	117,263	154,246	41,108
DIFFERENCE	16,902	7,305	9,969	19,586	15,413	43,225	54,163	(15,192)
PERCENT INCREASE/DECREASE	43.90%	8.16%	46.67%	27.10%	40.48%	36.86%	35.11%	-36.96%